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American Fern Journal

Vol. 10

JANUARY-MARCH, 1920

No. 1.

Notes on American Ferns—XV¹

BY WILLIAM R. MAXON

EQUISETUM FLUVIATILE L. Supplementing Mr. Nelson's record of the occurrence of this species in Oregon, in the last number of the JOURNAL, the following additional specimen from another locality in that state may be mentioned: Lowlands along the Willamette River, five miles south of Corvallis, July 6, 1918. *William E. Lawrence* 1904.

LYCOPIDIUM ALOPECUROIDES L. This species, mentioned in a recent number of the JOURNAL² as one of the few likely to be added to the District of Columbia fern flora through further exploration in the coastal plain region east of Washington, was found by the writer, on September 26, 1919, in the magnolia bog near Suitland, Maryland, which Mr. Paul C. Standley has recently described³ in connection with the local discovery of *Senecio Crawfordii*. The plant, which was not very abundant, was nearly confined to deep tussocks of sphagnum within a small area at the very wet lower border of the bog, in partial shade. Only a few individuals were fertile. The arched sterile stems were equally characteristic, however, offering the strongest contrast to the closely prostrate sterile parts of *L. adpressum*, which grew near by, rooting along their entire length. That

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²9: 41. 1919.

³*Rhodora* 21; 117-120. 1919.

[Vol. 9, No. 4 of the JOURNAL, pages 99-130, plates 6-8, was issued Jan. 24, 1920.]

L. alopecuroides had been overlooked in this bog, which has been known to botanists for several years, is doubtless due to its development late in the season, at which time the bog had probably not been visited by collectors. The nearest previous locality for this species is, apparently, that listed by McAtee⁴ for Newcastle County, Delaware.

LYCOPODIUM ALPINUM L. Though known in North America from the Gaspé region of eastern Quebec, from abundant material collected in Alaska, and from a few specimens collected as far south as the Revelstoke region of British Columbia (*Shaw* 40, 894, 959 in part), this species appears not to be recognized as occurring within the United States. The present record relates to excellent fruiting specimens collected in the vicinity of Snyder Lake, Glacier National Park, Montana, at an altitude of about 1,500 meters, August 23, 1919, by Mr. Paul C. Standley (no. 17957), while engaged in gathering material for a descriptive flora of the Park. The plants, which were remarked as being of a very pale color, were collected at the edge of a rock slide, under blueberries. Specimens from Mount Paddo, Washington, have been distributed under this name by Mr. Suksdorf, but the material so labeled proves to be *L. sitchense* Rupr.

POLYSTICHUM JENNINGSI Hopkins. Among other interesting ferns brought back from Glacier National Park, Montana, by Mr. Standley are two numbers of *Polystichum* which seem to bridge the supposed gap between *P. Jenningsi* and *P. Andersoni* Hopkins, whose status was recently discussed by the writer.⁵ They are: *Standley* 17443, collected in an alder thicket near a brook, along the lower part of the trail from Many Glacier Hotel to Piegan Pass, at an altitude of about 1,500 meters; and

⁴Bull. Biol. Soc. Washington 1: 84. 1918.

⁵Amer. Fern Journ. 8: 33-37. 1918.

Standley 16107, collected on a steep brushy and wooded slope, under alders, near Grinnell Lake, at 1,500 to 1,650 meters elevation. The specimens of both collections are fertile and apparently grew under favorable conditions. Those constituting no. 17443 are unmistakably referable to the form called *P. Jenningsi*, and though only 45 cm. high, and thus considerably smaller than the type specimen (from Rainier National Park, Washington), agree closely with other Washington material previously listed by the writer, differing only in their relatively longer basal pinnae. The specimens collected as no. 16107, however, are about 80 cm. high and, while agreeing with the foregoing material in most respects, closely approach *P. Andersoni* (of which three fronds from the original plant are at hand) in their narrower pinnae and more noticeably awned segments. A critical comparison of Mr. Standley's two collections shows no dependable differences between them, and a review of the whole series indicates a single species in which the leaf blade varies from narrowly lance-oblong to lance-elliptic, the basal pinnae varying from a length of one-third to nearly two-thirds that of the middle pinnae. It seems necessary, therefore, to regard *P. Jenningsi*⁶ as a synonym of *P. Andersoni* Hopkins, described a few years earlier.⁷

NOTHOLAENA PARRYI D. C. Eaton. In listing the westernmost stations for *Cheilanthes Feei* not long ago⁸ the writer, as a result of too hasty examination, misidentified small specimens of *Notholaena Parryi* from Mountain Spring, California (*Schoenfeldt* 3080), as *C. Feei*. The mistake was noticed in coming upon much better specimens collected at the same locality by Parish (no. 9028) in 1914. The close similarity of the two spe-

⁶Ann. Carnegie Mus. 11: 362. pl. 37. 1917.

⁷Amer. Fern Journ. 3: 116. pl. 9. 1913.

⁸Amer. Fern Journ. 8: 119. 1918.

cies is well known, the most obvious difference, as mentioned by Eaton, consisting in the copious covering of slender-pointed but long, coarse, persistent, septate hairs of *N. Parryi*, the upper surface of the blades of *C. Feei* being "scantily furnished with whitish webby hairs" and "never hirsute-tomentose." Moreover, *C. Feei* has the margins of the segments narrowly but regularly recurved, while in *N. Parryi* the margins are slightly if at all recurved, the segments being in fact nearly flat, as in *C. Cooperae*. Although the retention of *N. Parryi* in *Notholaena* appears never to have been seriously questioned, the plant might with about equal propriety be placed in *Cheilanthes*, because of its somewhat clavate vein-tips. A comprehensive revision of *Notholaena* and *Cheilanthes* and their near allies is urgently needed, including especially the numerous tropical species.

Notholaena Parryi, described originally from St. George, in southwestern Utah, is known to range thence to south-central Arizona and the desert region of southern California. It ascends to 1,740 meters in the Panamint Mountains, Inyo County, California, but is said by Parish to be more abundant at low altitudes, as, for example, at Palm Springs, altitude about 150 meters, on the eastern slope of the San Jacinto Mountains.

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